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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/13/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/772,130	CHEN, JUN	
	Examiner	Art Unit	
	Jason K. Lin	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *17-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 25-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to application No. 10/772,130 filed on 02/03/2004. Claims 1-40 are pending and have been examined.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. **Claims 1-16, 25-31, 32-38, 39-40**, drawn to displaying EPG and managing execution of applications to provide content via a virtual tuner, classified in class 725, subclass 39.

II. **Claims 17-24**, drawn to displaying an EPG, where the representations of content includes a uniform descriptor and managing execution of applications via a virtual tuner, classified in class 725, subclass 140.

3. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination II has separate utility such as sending video image regions of interest to the client. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a

claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

4. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Lewis Lee on March, 1, 2007 a provisional election was made without traverse to prosecute the invention of **Group 1, claims 1-16, 25-31, 32-38, 39-40.** Affirmation of this election must be made by applicant in replying to this Office action. **Claims 17-24** withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 9, 11-14, 16, 25-29** are rejected under 35 U.S.C. 102(e) as being anticipated by Jerding (6,738,982).

Consider **claim 9**, Jerding teaches a virtual tuner executed on a client (Col 3: lines 19-27 and Fig. 2 teaches a memory 34 that contains operation system 33 service application manager (SAM) 29 that handles the lifecycle of the applications including the definition, initiation, activation, etc. of applications), a method comprising:

receiving a selection made from a plurality of content using an EPG that is output by the client (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services supported by the DHCT. Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc. Col 4:

line 67 – col 5: line 3 teaches receiving user input for a plurality of selectable link labels available for selection on display Fig.2, 21), wherein:

the EPG includes a representation of each said content (Col 4: lines 34-41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc);

each said content is provided for output by a respective one or more of a plurality of applications (col 5: lines 5-14 teaches after API calls are transferred to the desired application Fig.2, 25, the application executes and presents the designated service to the user on the display Fig.2, 21); and

at least one said content is television programming (Col 3: lines 29-35 teaches video programming such as HBO and CNN. Col 7: lines 31-43 teaches the service can be a channel such as NBC in a non-limiting example);

choosing one or more of the plurality of applications that, when executed, provide the selected content (Col 5: lines 5-14 teaches transferring the API call from the SAM to a desired application Fig.2, 25 and executing the application to present the service to the user on display Fig.2, 21; and

managing execution of the chosen one or more applications to output the selected content (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on

display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications).

Consider **claim 11**, Jerding teaches that the managing is performed in response to one or more events received from the EPG (Col 7: line 40 – col 8: line 4 teaches displaying an underlying application in full screen mode and an email application overlaid on top [foreground] by the SAM Fig.2, 37 of the full screen mode application when a selectable link is activated [events]).

Consider **claim 12**, Jerding teaches that the managing includes managing a lifecycle of the chosen one or more applications (Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Consider **claim 13**, Jerding teaches said content provided by a first said application is not compatible with a second said application (Col 3: lines 44-48 teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and

the other email content, so either content is not compatible with the other application).

Consider **claim 14**, Jerding teaches that the managing includes managing one or more windows (Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content); and

at least one said window is utilized to display the selected content (Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 16**, Jerding teaches one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 9 (Col 8: line 39 – col 9: line 14).

Consider **claim 25**, Jerding teaches a client comprising:

a processor (Col 8: line 39 – col 9: line 14 teaches that the executable instructions used to carry out operations and processes shown in the blocks of the invention can be fetched and executed on a computer-based system, processor-containing system, etc.);

a network interface, communicatively coupled to the processor, configured to provide a network connection to a wide area network (WAN) (Col 2: lines 58-61 teaches a communications interface [network interface] connected to a TAP Fig.1, 15. Col 2: lines 33-47 teaches a network made up of headend Fig.1, 11 connected through a network Fig.1, 20 to multiple DHCTs Fig.1, 16).;

a output interface, communicatively coupled to the processor, configured to provide an output for rendering by a display device (Col 2: lines 51-54 teaches the DHCT may be a stand-alone unit that is coupled to an external display Fig.2, 21. Col 5: lines 12-15 teaches executing the application and presenting the service to the user on display Fig.2, 21. It is inherent that there is an output interface from the stand-alone unit to the display); and

memory configured to maintain (Fig.2, 34):

a plurality of applications that are executable on the processor to provide an output of content on the output interface (Col 3: lines 35-48 teaches a plurality of applications that can be activated and/or executed by utilizing the computing resources in the DHCT Fig.2, 16. Applications that can be activated and/or executed include a watch TV application, pay-

per-view application, etc. Col 7: lines 64-67 teaches an email application. Col 5: lines 12-14 teaches executing the application Fig.2, 25 and presenting the service to the user on the display Fig.2, 21), wherein at least one said content is television programming received at the network interface (Col 58-61 teaches the DHCT Fig.1, 16 communications interface receiving signals that include media such as video, audio, graphical and data information. Col 3: lines 28-35 teaches video programming such as HBO and CNN);

an EPG engine that is executable on the processor to provide an EPG for output on the output interface (Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc. Col 8: lines 39-47 teaches an HTML engine Fig.2, 31 that renders the HTML content, where these executable instruction codes are executed on a processor-containing system), wherein the EPG includes a plurality of representations of said content for selection (Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different

content such as internet web content, information source provide by cable tv, etc); and

a virtual tuner that is executable on the processor to launch one or more said applications in response to selection of said content using the EPG (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications).

Consider **claim 26**, Jerding teaches that the virtual tuner is further executable to terminate execution of the one or more said applications (Col 3: lines 19-27 teaches service application manager (SAM) Fig.2, 29 that handles the lifecycle of applications on the system, including suspension and deletion of services).

Consider **claim 27**, Jerding teaches that the virtual tuner is further executable to: manage one or more windows corresponding to the plurality of applications (Col 7: line 40 – col 8: line 4 teaches presenting applications in only

a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content); and

at least one said window includes a display of the selected said content (Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 28**, Jerding teaches the network interface is configured as a tuner for receiving one or more broadcasts of the television programming over the WAN (Col 2: lines 58-61 teaches a communications interface for receiving media such as vide, audio, graphical and data information. Col 3: lines 28-35 teaches in a non-limiting example an application tuning to video programming that can be executed to view HBO or CNN. Col 5: line 18 – col 6: line 15 teaches the uniform resource identifier scheme that defines the services executed by the user. Col 6: line 8-10 teaches an identifier for NBC network broadcast that can be displayed); and

the WAN is configured as a broadcast network (Col 2: lines 33-62 teaches a headend Fig.1, 11 receiving television signals and transmitting the signals over

system Fig.1, 10. The headend is connected to multiple DHCTs Fig.1, 16 through network Fig.1, 20. The DHCT Fig.1, 16 receives media such as video, audio, etc. Fig. 1 displays the network for transmission of media from headend to user terminals [broadcast network]).

Consider **claim 29**, Jerding teaches that the content provided by a first said application is not compatible with a second said application (Col 3: lines 44-48 teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Hoarty et al. (6,305,020).

Consider **claim 10**, Jerding teaches launching the chosen one or more applications for outputting the selected said content (Col 4: lines 67-14 teaches receiving user input selection from a plurality of available selectable link labels. The application is executed and presents the designated service to the user after the API calls are transferred from the SAM Fig.2, 29 and the operation system Fig.2, 23 to the desired application. Col 3: lines 19-27 teaches that the SAM Fig.2, 29 handles the initiation, activation of the application).\

Jerding does not explicitly teach terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG.

In an analogous art, Hoarty teaches terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down [termination] as described in col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to terminate the chosen one or more applications when the outputting is completed or an event is received from the EPG, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

10. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Knudson et al. (6,526,577).

Consider **claim 30**, Jerding does not explicitly teach the WAN is the Internet.

In an analogous art, Knudson teaches a WAN is the Internet (Col 5: lines 34-50 teaches video signals, e.g. television programs, that is distributed over communications path Fig.2c, 20. Communications path 20 may be an Internet link).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to have the WAN as the internet, as taught by Knudson, for the advantage of providing programming to users that might otherwise be unable to receive programming over the air and do not have cable.

11. **Claims 15, 31, 32, 34-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Hassell et al (2007/0033615).

Consider **claim 15**, Jerding teaches the plurality of content includes remote content available over the Internet (Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches that such content can be any internet web content), but does not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 31**, Jerding teaches the content includes remote content available over the WAN (Col 4: lines 61-64 teaches selectable link labels that

correspond to a plurality of services. Col 4: lines 9-12 teaches that such content can be any internet web content, or any other information source provided by the cable television system), but does not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 32**, Jerding teaches a system comprising:

a network (Fig. 1, 20);

a client communicatively coupled to the network (Fig. 1 and col 2: lines 46-47 teach a client Fig.1, 16 coupled to the network Fig.1, 20) and including;

one or more processors (Col 8: lines 39-47 teaches a processor-containing system that is used to execute instructions for implementing logical functions and any process descriptions or blocks in flow charts representing portions of code) and a plurality of applications that are executable thereon (Col 3: lines 35-48 teaches a plurality of executable applications) to provide at least one of local content and the remote content for rendering on a display device (Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc. Col 5: lines 10-15 teaches executing an application and presenting the designated service to the user on display Fig.2, 21).

a guide application that is executable to generate an EPG from the remote EPG content that is configured to initiate one or more events (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services supported by the DHCT. Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user. Col 4: line 67 – col 5: line 7 teaches receiving user input selection of one of the plurality of selectable link labels and forming a C-based API call after selection. Col 4: lines 8-12 teaches that the

services can be any internet web content, or other information source provided by cable television system); and

a virtual tuner that is executable to manage the plurality of applications in response to the one or more events (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications).

Jerding does not explicitly teach an EPG provider communicatively coupled to the network and including remote EPG data that describes remote content that is available over the network, the remote content including television programming

In an analogous art, Hassell teaches an EPG provider communicatively coupled to a network and including remote EPG data that describes remote content that is available over the network, the remote content including television programming (Paragraph 0017-0019 teaches a program guide data source Fig.1, 14 [EPG provider] connected to a network. The EPG provider data is transmitted by main facility Fig.1, 12 includes television program listings data such as program times, channels, titles, and descriptions).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to include an EPG provider communicatively coupled to

the network and including remote EPG data that describes remote content that is available over the network, the remote content including television programming, as taught by Hassell, for the advantage of providing EPG data directly from a single source simplifying the amount of connections needed for the client.

Jerding further fails to explicitly teach local EPG data that describes local content;

a guide application that is executable to generate an EPG from local EPG content that is configured to initiate one or more events.

In an analogous art, Hassell further teaches local EPG data that describes local content (Paragraph 0038 teaches a programs listing that indicates currently stored programs on a storage device. Paragraph 0022 teaches that the storage device can be contained in set-top box Fig.2, 28);

a guide application that is executable to generate an EPG from local EPG content that is configured to initiate one or more events (Fig. 5b Paragraph 0038-0040 teaches an EPG containing programs from storage device and programs from outside sources. Paragraph 0041 teaches a user selecting a stored program listing and the EPG issuing commands in response to the selection).

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to include local EPG data that describes local content and a guide application that is executable to generate an EPG from local EPG content that is configured to initiate one or more events, as taught by Hassell, for the advantage of providing easy and organized access of stored programming to

the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 34**, Jerding and Hassel teaches the local EPG data is generated by the guide application by examining the client (Paragraph 0038-0040 teaches displaying program listing data of programs currently stored on storage device. When a stored program is selected the program guide can further obtain more information associated with the listing from the storage device).

Consider **claim 35**, Jerding and Hassel teach that the content provided by a first said application is not compatible with a second said application (Jerding - Col 3: lines 44-48 teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

Consider **claim 36**, Jerding and Hassel teaches the virtual tuner manages a lifecycle of each said application (Jerding - Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Consider **claim 37**, Jerding and Hassel teaches the virtual tuner further manages one or more windows that include a display of at least one of the local and remote content (Jerding - Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content. Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 38**, Jerding and Hassel teaches the EPG includes a plurality of representations, wherein at least one said representation represents the remote content and another said representation represents the local content (Hassel – Fig. 5b and paragraph 0038 teaches selectable listings [e.g.

PROGRAM 1, PROGRAM 2, ...] [representations] corresponding to stored and public television on a program guide).

12. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Hassel (2007/0033615), and further in view of Hoarty et al. (6,305,020).

Consider **claim 33**, Jerding and Hassel teaches the virtual tuner manages the plurality of applications by:

launching one or more of the plurality of applications to process at least one of the local and remote content (Jerding - Col 4: lines 67-14 teaches receiving user input selection from a plurality of available selectable link labels. The application is executed and presents the designated service to the user after the API calls are transferred from the SAM Fig.2, 29 and the operation system Fig.2, 23 to the desired application. Col 3: lines 19-27 teaches that the SAM Fig.2, 29 handles the initiation, activation of the application. Col 3: lines 28-35 teaches in a non-limiting example executing a tuning application to display video programming such as HBO and CNN); and

Jerding and Hassel do not explicitly teach terminating one or more said applications when provision of the content is completed.

In an analogous art, Hoarty teaches terminating one or more applications when provision of the content is completed (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over,

the program follows the steps of call take down [termination] as described in col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify combined systems of Jerding and Hassel to terminate one or more applications when provision of the content is completed, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

13. **Claims 1, 2, 4-6, 8, 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Houghton et al (US 2005/0021609).

Consider **claim 1**, Jerding teaches a method comprising:

outputting an Electronic Programming Guide (EPG) for display by a client (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services supported by the DHCT. Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user), wherein:

the EPG includes a plurality of representations of a plurality of content (Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches

different content such as internet web content, information source provide by cable tv, etc);

the client includes a plurality of applications (Col 3: lines 36-48 teaches different applications Fig.2, 25 that can be executed on the client are watch TV, pay-per view, video-on-demand, etc. Col 7: lines 64-67 teaches an email application);

one or more said content is provided for output by a respective said application (col 5: lines 5-14 teaches after API calls are transferred to the desired application Fig.2, 25, the application executes and presents the designated service to the user on the display Fig.2, 21); and

the EPG is configured to form one or more events in response to user interaction with one or more said representations (Col 4: line 67 – col 5: line 7 teaches receiving user input selection of one of the plurality of selectable link labels and forming a C-based API call after selection); and

executing a virtual tuner on the client to manage execution of each said application to provide respective said content in response to the events formed utilizing the EPG (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications).

Although Jerding teaches television programming (Col 3: lines 28-35 teaches video programming such as HBO and CNN), Jerding does not explicitly teach the content is television programming for receipt by the client over an Internet.

In an analogous art, Houghton teaches that the content is television programming for receipt by the client over an Internet (Paragraph 009 – 0010 teaches receiving web content over communications card Fig.4, 121. The web content may be sports event or a continuous series of programming that is transmitted over the internet)

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to include at least one content is television programming for receipt by the client over an internet, as taught by Houghton, for the advantage of providing programming that might have otherwise been unavailable for which a broadcast network who has viewing rights, but decides not to broadcast the event (Houghton – paragraph 0010).

Consider **claim 2**, Jerding teaches that the virtual tuner is further executed to manage a lifecycle of each said application (Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Consider **claim 4**, Jerding teaches that the executing of the virtual tuner further comprises managing one or more windows (Col 7: line 40 – col 8: line 4 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content); and

at least one said window is utilized to display the respective said content (Col 7: line 31 – col 8: line 4 teaches displaying the underlying application in full screen mode where the underlying application can be a service assigned to channel 32 like NBC in a non-limiting example).

Consider **claim 5**, Jerding teaches that the managing of the one or more windows includes displaying the at least one said window in a foreground of a display in response to one or more said events (Col 7: line 40 – col 8: line 4 teaches displaying an underlying application in full screen mode and an email application overlaid on top [foreground] by the SAM Fig.2, 37 of the full screen mode application when a selectable link is activated [events]).

Consider **claim 6**, Jerding teaches that content provided by a first said application is not compatible with a second said application (Col 3: lines 44-48

teaches different applications that can be activated and/or executed. Col 28-35 teaches an application to tune to video programming [1st application] such as HBO or CNN. Col 7: lines 31-67 teaches a NBC channel already tuned to [1st application] and an email application [2nd application] that provides email content. Both applications mentioned here is specific to providing video programming and the other email content, so either content is not compatible with the other application).

Consider **claim 8**, Jerding and Houghton teaches one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 1 (Jerding - Col 8: line 39 – col 9: line 14).

Consider **claim 39**, Jerding teaches a system comprising:

means for providing content for rendering (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the applications. Col 3: lines 28-34 teaches in a non-limiting example a tuning application providing video programming such as HBO or CNN), wherein:

the providing means is executable on a set-top box; (Col 2: lines 53-54 teaches a DHCT that can be a stand alone unit coupled to external display Fig.2, 21. Col 8: line 39 – col 9: line 14 teaches that the executable instructions used to carry out operations and processes shown in the blocks of the invention can be fetched and executed on a computer-based system, processor-containing system, etc); and

means for displaying a user interface having a plurality of representations of said content, wherein each said representation is selectable to select corresponding said content (Col 3: line 66 – col 4: line 12 teaches an application composed in middleware markup language providing an interface of selectable link labels that enable the user to activate services supported by the DHCT. Col 4: lines 26-29 teaches that the HTML engine Fig.2, 21 generates a graphical user interface to the user. Col 4: lines 34- 41 teaches HTML content Fig.2, 35 providing selectable link labels or representations of services. Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches different content such as internet web content, information source provide by cable tv, etc); and

means for managing the providing means to provide said content that is selected by utilizing the user interface of the displaying means (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM Fig.2, 29 [virtual tuner] and having the desired application Fig.2, 25 execute presenting the service to the user on display Fig.2, 21. Col 3: lines 19-27

teaches a service application manager (SAM) Fig.2, 29 that handles the applications).

Jerding further does not explicitly teach at least one said content includes television programming received over the Internet;

In an analogous art, Houghton further teaches that the content is television programming for receipt by the client over an Internet (Paragraph 009 – 0010 teaches receiving web content over communications card Fig.4, 121. The web content may be sports event or a continuous series of programming that is transmitted over the internet)

Therefore, it would have been obvious to one of ordinary skill in the art to modify Jerding's system to include at least one content is television programming for receipt by the client over an internet, as taught by Houghton, for the advantage of providing programming that might have otherwise been unavailable for which a broadcast network who has viewing rights, but decides not to broadcast the event (Houghton – paragraph 0010).

14. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Houghton et al (US 2005/0021609), and further in view of Hoarty et al. (6,305,020).

Consider **claim 3**, Jerding teaches that the virtual tuner manages the execution by: launching one or more said applications for outputting said content selected utilizing the EPG (Col 4: lines 67-14 teaches receiving user input selection from a plurality of available selectable link labels. The application is executed and presents the designated service to the user after the API calls are transferred from the SAM Fig.2, 29 and the operation system Fig.2, 23 to the desired application. Col 3: lines 19-27 teaches that the SAM Fig.2, 29 handles the initiation, activation of the application); and

Jerding and Hassel do not explicitly teach terminating one or more said applications when the outputting is completed.

In an analogous art, Hoarty teaches terminating one or more applications when the outputting is completed (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down [termination] as described in col 9: lines 64-11).

Therefore, it would have been obvious to one of ordinary skill in the art to modify combined systems of Jerding and Houghton to terminate one or more applications when the outputting is completed, as taught by Hoarty, for the

advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

15. **Claims 7 and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jerding (6,738,982) in view of Houghton et al (US 2005/0021609), and further in view of Hassell et al (2007/0033615).

Consider **claim 7**, Jerding and Houghton teach that the plurality of content includes remote content available over the internet (Jerding - Col 4: lines 61-64 teaches selectable link labels that correspond to a plurality of services. Col 4: lines 9-12 teaches that such content can be any internet web content), but doe not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify combined systems of Jerding and Houghton to include local content available locally on the client, as taught by Hassell, for the advantage of

providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 40**, Jerding and Houghton teach that the content includes remote content available over the Internet (Houghton - Paragraph 009 – 0010 teaches receiving web content over communications card Fig.4, 121. The web content may be sports event or a continuous series of programming that is transmitted over the internet), but doe not explicitly teach local content available locally on the set-top box.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify combined systems of Jerding and Houghton to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Cited Prior Art

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lemmons et al. discloses a EPG using markup language in (US 6,442,755).

Russ et al. discloses a window manager running in conjunction with the OS to manage windows of all the different applications in (US 2004/0025179).

Connelly discloses a program guide in Fig. 3b including shows, web content, and games in (US6,144,376).

Karaoguz et al. discloses an media interface guide Fig. 1b including personal content located at the client or within a private network and public programming in (US 2004/0117826).

Parker discloses multiple applications located in memory in Fig. 2, and launching a Watch TV application to provide the program upon selection of program in a program listing in (US 2004/0068752).

Franken et al. discloses a browser recognizing the content type and launching the appropriate program to display the content in (US 2004/0139464).

Yang et al. discloses multiple program file types in Fig. 7, and using a location ID to start the appropriate rendering process of the selected material in (US 2002/0133822).

Wugofski et al. discloses seamlessly integrating television and internet programs into a signal program guide in (US 7,152,236).

Sardera discloses multiple applications executable on a processor (US 2005/0028200).

Ellis et al. discloses controlling and running different applications and resource allocations in (US 2004/0139464).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Lin whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 7:30AM-5:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571)272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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3/02/2007

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